

AMENDMENTS TO THE CLAIMS:

Please amend Claims 15 and 17 as follows:

1. (Cancelled)

2. (Withdrawn) An image processing method comprising:

setting a common coordinate system which can be transformed from individual coordinate systems of a plurality of image sensing devices;

estimating postures of at least one of the plurality of image sensing devices;

calculating an estimated posture of the common coordinate system using at least one of the estimated posture of the plurality of image sensing devices;

calculating a correction transform for reducing a shakiness of the common coordinate system using the estimated posture of the common coordinate system;

composing a panoramic image by joining a plurality of sensed images, which are sensed by the plurality of image sensing devices; and

applying the correction transform for reducing a shakiness of the common coordinate system to the panoramic image.

3. (Previously Presented) The method according to claim 15, wherein the correction transforms correct roll and pitch angles.

4. (Previously Presented) The method according to claim 15, wherein the correction transforms correct yaw, roll and pitch angles.

5 - 7. (Cancelled)

8. (Withdrawn) An image processing apparatus comprising:

setting unit adapted to set a common coordinate system which can be transformed from individual coordinate systems of a plurality of image sensing devices;

estimation unit adapted to estimate postures of at least one of the plurality of image sensing devices;

first calculation unit adapted to calculate an estimated posture of the common coordinate system using at least one of the estimated posture of the plurality of image sensing devices;

second calculation unit adapted to calculate a correction transform for reducing a shakiness of the common coordinate system using the estimated posture of the common coordinate system;

composition unit adapted to compose a panoramic image by joining a plurality of sensed images, which are sensed by the plurality of image sensing devices; and

application unit adapted to apply the correction transform for reducing a shakiness of the common coordinate system to the panoramic image.

9. (Cancelled)

10. (Withdrawn) A computer program for making a computer function as an image processing apparatus of claim 8.

11. (Cancelled)

12. (Withdrawn) A computer readable storage medium storing a computer program of claim 10.

13. (Cancelled)

14. (Withdrawn) An imaging apparatus comprising:  
a plurality of image sensing devices;  
a processor for composing a stabilized panoramic image; and  
a display device for displaying the panoramic image,  
wherein said processor composes the panoramic image by performing the steps of:  
setting a common coordinate system which can be transformed from individual coordinate systems of the plurality of image sensing devices;  
estimating postures of at least one of the plurality of image sensing devices;  
calculating an estimated posture of the common coordinate system using at least one of the estimated posture of the plurality of image sensing devices;  
calculating a correction transform for reducing a shakiness of the common coordinate system using the estimated posture of the common coordinate system;

composing a panoramic image by joining a plurality of sensed images, which are sensed by the plurality of image sensing devices; and

applying the correction transform for reducing a shakiness of the common coordinate system to the panoramic image in order to compose the stabilized image.

15. (Currently Amended) An image processing method for generating a panoramic image from a plurality of images obtained by a respective plurality of image sensing devices, wherein the plurality of image sensing devices are located to have fixed relative positions, said method comprising the steps of:

calculating first transform conditions, each of which is for transforming an orientation of a respective one of the plurality of image sensing devices at a target image frame into an orientation at a predetermined image frame which is different from the target image frame;

obtaining second transform conditions, each of which corresponds to a respective one of the plurality of image sensing devices, based on each of coordinate systems of the image sensing devices and a coordinate system of a virtual image sensing device;

calculating, for each of the image sensing devices, a respective orientation of the virtual image sensing device at the predetermined image frame based on the first and second transform conditions;

calculating, based on the calculated orientations of the virtual image sensing device, correction transforms each of which is for reducing a shakiness of respective image sensing devices at the target image frame; and

composing a panoramic image using images sensed at the target image frame by the plurality of image sensing devices; and

displaying the panoramic image by applying the correction transforms.

16. (Previously Presented) The method according to claim 15, wherein the correction transforms are calculated based on a weighted average of the orientations of the virtual image sensing device calculated for the respective image sensing devices.

17. (Currently Amended) An image processing apparatus for generating a panoramic image from a plurality of images obtained by a respective plurality of image sensing devices, wherein the plurality of image sensing devices are located to have fixed relative positions, said apparatus comprising:

means for calculating first transform conditions, each of which is for transforming an orientation of a respective one of the plurality of image sensing devices at a target image frame into an orientation at a predetermined image frame which is different from the target image frame;

means for obtaining second transform conditions, each of which corresponds to a respective one of the plurality of image sensing devices, based on each of coordinate systems of the image sensing devices and a coordinate system of a virtual image sensing device;

means for calculating, for each of the image sensing devices, a respective orientation of the virtual image sensing device at the predetermined image frame based on the first and second transform conditions;

means for calculating, based on the calculated orientations of the virtual image sensing device, correction transforms each of which is for reducing a shakiness of respective image sensing devices at the target image frame; and

means for composing a panoramic image using images sensed at the target image frame by the plurality of image sensing devices; and

means for displaying the panoramic image by applying the correction transforms.

18. (Previously Presented) A computer-readable storage medium storing a computer program for effecting the method according to claim 15.